



PE Endstate, LOEs & Metrics

MAR 2019

RDML F.R. Luchtman, PEAT Lead



PE Endstate, LOEs & Metrics

Endstate

1. Provide Effective Medical Treatment
2. Provide Spec CP Pressure
3. Provide Spec OBOGS

In Work

Implemented / IOC

Lines of Effort (RCCA Driven)

Optimize the Machine

AFB 822 ECS Reset
AFB 832 ECS Reset
ECP 1233 CXAS Removal
ECP 6488 SBAR
ECP 6506 CPOMS
ECP 6519 LSSI
HhART
ECP 6477 PBAR
ECP 6487 Item 51/26
ECP 6481 Ph 2 ECS s/w
ECP 6500 ECS Heater
AFB 821 ECS Reset
IAFC 676 CXAS Disable
AFB 814 SRC/Life Limits
ECP 6481 Ph 1 ECS s/w
AFB 815 SRC/Life Limits

Protect & Prevent

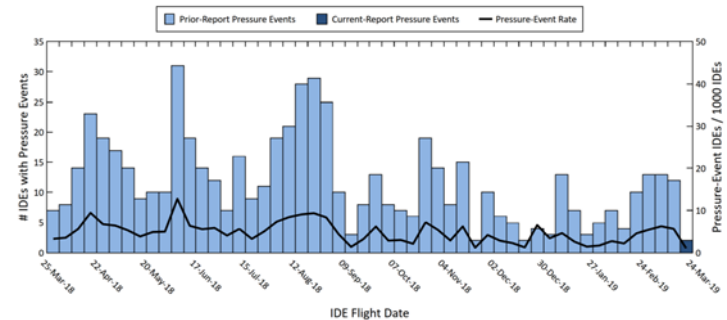
Flight Gear Check
Chronic Care
Provider Education
Physiologist Syllabus
PE Reporting
Acute Care
Flight Surgeon Syllabus

Inform the Aviator

NATOPS
PEAT Roadshow
CPOMS
Physio Monitor
Garmin Alert

Metrics

F/A-18 / EA-18G Weekly NATOPS Cabin Pressure Event Summary

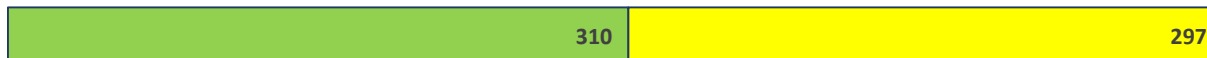


Future Metrics:

1. OBOGS Performance
2. PE Aviator Flight Status

F/A-18 / EA-18G RCCA Closures

51%



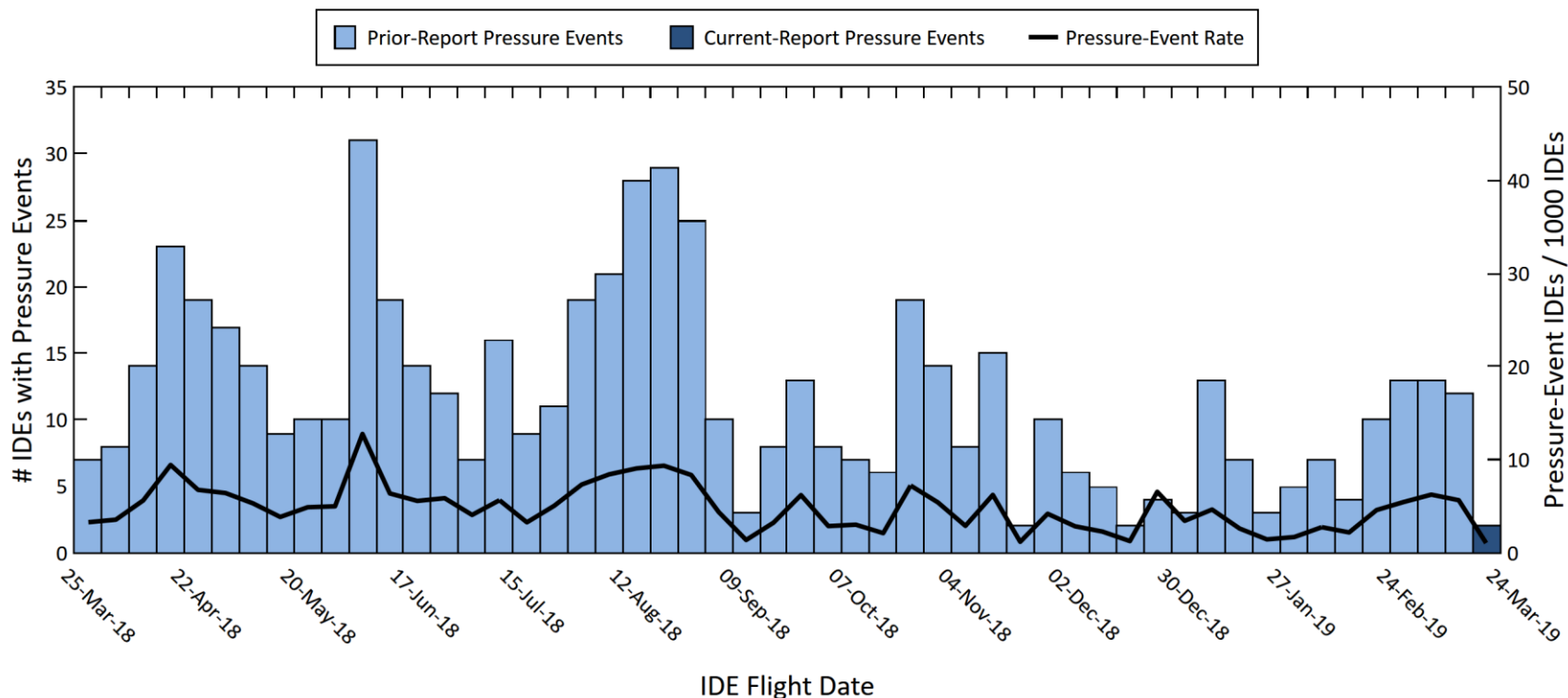
■ Closed ■ Open

607



F/A-18 & EA-18G Weekly NATOPS Cabin Pressure Event Summary v2.1

- Pressure-Event IDE History shows weekly counts and rates of occurrence of Pressure-Event IDEs in the NATOPS Pressure Report over the past year.
- TMS is determined from BUNO parsed from IDE file name. "All Files" figure contains all data, including those with unknown TMS.
- "IDE Flight Date" is the date represented in IDE time data. This data is known to contain occasional errors.
- "Current-Report Pressure Events" were uploaded in this file upload period. "Prior Report Pressure Events" are historical data.
- "Pressure-Event Rate" is calculated with respect to all IDEs meeting the criteria for inclusion in the report.



- A single NATOPS cabin pressure event is defined as multiple pressure fluctuations within a single Slam Stick file (IDE). A pressure fluctuation is identified as a peak-to-peak change in cabin altitude meeting three criteria:
 1. Peak-to-peak magnitude change of cabin altitude > 2000 feet
 2. Average cabin pressure rate-of-change > 0.2 psi/second
 3. Duration < 15 seconds



LOE: Optimize the Machine

| TMS | Component | Assoc PEs | TGT | IN/OUT FLOW | IOC |
|------------|---|-----------|------|-------------|--------|
| T-45C | Straight Pipe | UNK | AOS | BOTH | FY18 |
| T-45C | Flight Idle Increase | UNK | AOS | BOTH | FY18 |
| T-45C | ABOS | UNK | AOS | N/A | FY20 |
| T-45C | GGU-25 | N/A | AOS | N/A | TBD |
| F/A-18 A-D | AFB 821 ECS Reset | SYS | REL | BOTH | JUN 17 |
| F/A-18 A-D | AFB 822 ECS Reset | SYS | REL | BOTH | FY19 |
| F/A-18 A-D | AFB 832 ECS Reset | SYS | REL | BOTH | FY19 |
| F/A-18 A-D | IAFC 676 CXAS Disable | SYS | STBL | OUT | APR 17 |
| F/A-18 A-D | AFB 814 SRC Inspection/Life Limits | SYS | REL | BOTH | FEB 17 |
| F/A-18 A-D | ECP 1233 CXAS Removal | 14 | STBL | OUT | NOV 19 |
| F/A-18 A-G | ECP 6488 SBAR | 34 | REL | IN | CY20 |
| F/A-18 A-G | ECP 6506 CPOMS | MAR | AOS | N/A | AUG 19 |
| F/A-18 A-G | ECP 6519 LSSI | MAR | AOS | N/A | CY21 |
| F/A-18 A-G | HHART | SYS | REL | BOTH | CY20 |
| F/A-18 A-G | NATOPS Changes (Multiple) | MAR | STBL | BOTH | CY19 |
| F/A-18 A-G | IETMS Changes (Multiple) | MAR | STBL | BOTH | CY19 |
| F/A-18 A-G | ATP Rework (Multiple) | MAR | STBL | BOTH | CY21 |
| F/A-18 E-G | ECP 6477 PBAR | 16 | REL | IN | SEP 19 |
| F/A-18 E-G | ECP 6478 Item 51/26 Add Heat Valve | 10 | REL | IN | SEP 19 |
| F/A-18 E-G | ECP 6481 PH 1 ECS S/W | 20 | STBL | IN | MAR 18 |
| F/A-18 E-G | ECP 6481 PH 2 ECS S/W | 24 | STBL | BOTH | APR 20 |
| F/A-18 E-G | ECP 6500 ECS Heater Element | 20 | STBL | IN | TBD |
| F/A-18 E-G | ECP TBD Bleed System Pressure Sensor | 26 | STBL | IN | TBD |
| F/A-18 E-G | ECP6474 BALD Re-route | 4 | STBL | IN | FY16 |
| F/A-18 E-G | AFB 815 SRC Card Inspection/Life Limits | SYS | STBL | BOTH | FEB 17 |

SYS - System Improvement, MAR - Margin Improvement, # - Linked PEs, REL - Reliability Improvement, STBL - Stability Improvement

In Work

Implemented / IOC

There is no singular root cause of PE (i.e., no "smoking gun")

Physiological Events happen when components fail. There is no intrinsic design flaw.

Current efforts are focused on improving component reliability which will reduce instances of cockpit pressure exceedances